IN THE CLAIMS:

Please substitute the following claims for the same numbered claims in the application:

1.   (Currently Amended) A method for organizing a set of nodes into a minimum number of connected clusters in a wireless transmission system, said method comprising steps of[[;]]:

using of bits in packets used in the initial stages of the a device discovery procedure, to include information relating to a state of said nodes during the initial stages of the procedure;.

setting parameters in the procedure for device discovery to achieve the said a separation of the nodes into those in said a transmit-state and said a receive-state;

defining Master-designates among said nodes through a statistical procedure and defining remaining nodes as a Slave-designate; and

defining clusters including said Master-designates and at least one said Slave-designate, wherein said Slave-designate continuously scans for said an inquiry message transmitted from said Master-designate and said Slave-designate transmits said an inquiry response to said Master-designate upon receiving said inquiry message to establish a connection between said Master-designate and said Slave-designate[[.]],

wherein at least one Super-master-designate is selected from said Master-designate and at least one Proxy-Slave is selected for each Master-designate.

2.   (Currently Amended) The method according to the claim 1, A method for organizing a set of nodes into a minimum number of connected clusters in a wireless transmission system, said method comprising steps of:

using of bits in packets used in the initial stages of a device discovery procedure, to

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include information relating to a state of said nodes during the initial stages of the procedure;

setting parameters in the procedure for device discovery to achieve a separation of the nodes into those in a transmit-state and a receive-state;

defining Master-designates among said nodes through a statistical procedure and defining remaining nodes as a Slave-designate; and

defining clusters including said Master-designates and at least one said Slave-designate, wherein said Slave-designate continuously scans for an inquiry message transmitted from said Master-designate and said Slave-designate transmits an inquiry response to said Master-designate upon receiving said inquiry message to establish a connection between said Master-designate and said Slave-designate,

wherein at least one Super-master-designate is selected from said Master-designate and at one Proxy-Slave is selected for each Master-designate, said method further comprising a step of communicating between said Super-master-designate of one of said cluster and said Proxy-Slave of other of said cluster such that said Super-master-designate collects information of said clusters from each of said Proxy-Slave having an predetermined ID.

3.   (Original) The method according to the claim 1, wherein said bits in said packet are transmitted in initial stages of discovery of nodes and include information to convey states of said nodes.

4.   (Currently Amended) ~~The method according to the claim 1,~~ A method for organizing a set of nodes into a minimum number of connected clusters in a wireless transmission system, said

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method comprising steps of:

using of bits in packets used in the initial stages of a device discovery procedure, to include information relating to a state of said nodes during the initial stages of the procedure;.

setting parameters in the procedure for device discovery to achieve a separation of the nodes into those in a transmit-state and a receive-state;

defining Master-designates among said nodes through a statistical procedure and defining remaining nodes as a Slave-designate; and

defining clusters including said Master-designates and at least one said Slave-designate, wherein said Slave-designate continuously scans for an inquiry message transmitted from said Master-designate and said Slave-designate transmits an inquiry response to said Master-designate upon receiving said inquiry message to establish a connection between said Master-designate and said Slave-designate,

wherein an interval of said an inquiry scan is close to a duration of a scan window for said inquiry scan.

5.   (Currently Amended) ~~The method according to the claim 1,~~ A method for organizing a set of nodes into a minimum number of connected clusters in a wireless transmission system, said method comprising steps of:

using of bits in packets used in the initial stages of a device discovery procedure, to include information relating to a state of said nodes during the initial stages of the procedure;.

setting parameters in the procedure for device discovery to achieve a separation of the nodes into those in a transmit-state and a receive-state;

defining Master-designates among said nodes through a statistical procedure and defining

remaining nodes as a Slave-designate; and

defining clusters including said Master-designates and at least one said Slave-designate,

wherein said Slave-designate continuously scans for an inquiry message transmitted from said

Master-designate and said Slave-designate transmits an inquiry response to said Master-designate

upon receiving said inquiry message to establish a connection between said Master-designate and

said Slave-designate,

wherein said bits in said packet include information selected from the group consisting of

numbers of responses received by said node by a predetermined period, numbers of said nodes

included in said cluster, whether or not said node transmitted said inquiry response is included in

said cluster, and whether or not said node transmitting said inquiry response is said Master-

designate.

6.   (Currently Amended) ~~The method according to the claim 1,~~ A method for organizing a set

of nodes into a minimum number of connected clusters in a wireless transmission system, said

method comprising steps of:

using of bits in packets used in the initial stages of a device discovery procedure, to

include information relating to a state of said nodes during the initial stages of the procedure;.

setting parameters in the procedure for device discovery to achieve a separation of the

nodes into those in a transmit-state and a receive-state;

defining Master-designates among said nodes through a statistical procedure and defining

remaining nodes as a Slave-designate; and

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defining clusters including said Master-designates and at least one said Slave-designate, wherein said Slave-designate continuously scans for an inquiry message transmitted from said Master-designate and said Slave-designate transmits an inquiry response to said Master-designate upon receiving said inquiry message to establish a connection between said Master-designate and said Slave-designate,

wherein said statistical procedure includes Bernoulli trials executed by each node.

7.   (Original) The method according to the claim 1, wherein said wireless transmission system is a Bluetooth System.

8.   (Currently Amended) A system for organizing a set of nodes into a minimum number of connected clusters of bounded size in a wireless transmission system, said system comprising[[;]]:

means for using of bits in packets used in the initial stages of the a device discovery procedure, to include information relating to a state of said nodes during the initial stages of the procedure;

means for setting parameters in the procedure for device discovery to achieve the said a separation of the nodes into those in said a transmit-state and said a receive-state;

means for defining a Master-designate among said nodes through a statistical procedure and defining remaining nodes as a Slave-designate; and

means for defining a cluster including said Master-designate and at least one said Slave-designate, wherein said Slave-designate continuously scans for said an inquiry message

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transmitted from said Master-designate and said Slave-designate transmits ~~said~~ an inquiry

response to said Master-designate upon receiving said inquiry message to establish a connection

between said Master-designate and said Slave-designate[[.]],

wherein at least one Super-master-designate is selected from said Master-designate and at

least one Proxy-Slave is selected for each Master-designate.

9.   (Currently Amended) ~~The system according to the claim 8,~~ A system for organizing a set

of nodes into a minimum number of connected clusters of bounded size in a wireless

transmission system, said system comprising:

means for using of bits in packets used in the initial stages of a device discovery

procedure, to include information relating to a state of said nodes during the initial stages of the

procedure;

means for setting parameters in the procedure for device discovery to achieve a separation

of the nodes into those in a transmit-state and a receive-state;

means for defining a Master-designate among said nodes through a statistical procedure

and defining remaining nodes as a Slave-designate; and

means for defining a cluster including said Master-designate and at least one said Slave-

designate, wherein said Slave-designate continuously scans for an inquiry message transmitted

from said Master-designate and said Slave-designate transmits an inquiry response to said

Master-designate upon receiving said inquiry message to establish a connection between said

Master-designate and said Slave-designate,

wherein at least one Super-master-designate is selected from said Master-designate and at

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one Proxy-Slave is selected for each Master-designate, said system further comprising means for

communicating between said Super-master-designate of one of said cluster and said Proxy-Slave

of other of said cluster such that said Super-master-designate collects information of said clusters

from each of said Proxy-Slave having an predetermined ID.

10.   (Original) The system according to the claim 8, wherein said bits in said packets are

transmitted in initial stages of discovery of nodes and include information to convey states of

said nodes.

11.   (Currently Amended) ~~The system according to the claim 8,~~ A system for organizing a set

of nodes into a minimum number of connected clusters of bounded size in a wireless

transmission system, said system comprising:

        means for using of bits in packets used in the initial stages of a device discovery

procedure, to include information relating to a state of said nodes during the initial stages of the

procedure:

        means for setting parameters in the procedure for device discovery to achieve a separation

of the nodes into those in a transmit-state and a receive-state;

        means for defining a Master-designate among said nodes through a statistical procedure

and defining remaining nodes as a Slave-designate; and

        means for defining a cluster including said Master-designate and at least one said Slave-

designate, wherein said Slave-designate continuously scans for an inquiry message transmitted

from said Master-designate and said Slave-designate transmits an inquiry response to said

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Master-designate upon receiving said inquiry message to establish a connection between said Master-designate and said Slave-designate,

wherein an interval of said ~~said~~ an inquiry scan is close to a duration of a scan window for said inquiry scan.

12.   (Currently Amended) ~~The system according to the claim 8,~~ A system for organizing a set of nodes into a minimum number of connected clusters of bounded size in a wireless transmission system, said system comprising:

means for using of bits in packets used in the initial stages of a device discovery procedure, to include information relating to a state of said nodes during the initial stages of the procedure;

means for setting parameters in the procedure for device discovery to achieve a separation of the nodes into those in a transmit-state and a receive-state;

means for defining a Master-designate among said nodes through a statistical procedure and defining remaining nodes as a Slave-designate; and

means for defining a cluster including said Master-designate and at least one said Slave-designate, wherein said Slave-designate continuously scans for an inquiry message transmitted from said Master-designate and said Slave-designate transmits an inquiry response to said Master-designate upon receiving said inquiry message to establish a connection between said Master-designate and said Slave-designate,

wherein said bits in said packets include information selected from the group consisting of numbers of received by said node by a predetermined period, numbers of said nodes included

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in said cluster, whether or not said node transmitted said inquiry response is included in said

cluster, and whether or not said node transmitting said inquiry response is said Master-designate.

13.   (Currently Amended) ~~The system according to the claim 8,~~ A system for organizing a set

of nodes into a minimum number of connected clusters of bounded size in a wireless

transmission system, said system comprising:

       means for using of bits in packets used in the initial stages of a device discovery

procedure, to include information relating to a state of said nodes during the initial stages of the

procedure;

       means for setting parameters in the procedure for device discovery to achieve a separation

of the nodes into those in a transmit-state and a receive-state;

       means for defining a Master-designate among said nodes through a statistical procedure

and defining remaining nodes as a Slave-designate; and

       means for defining a cluster including said Master-designate and at least one said Slave-

designate, wherein said Slave-designate continuously scans for an inquiry message transmitted

from said Master-designate and said Slave-designate transmits an inquiry response to said

Master-designate upon receiving said inquiry message to establish a connection between said

Master-designate and said Slave-designate,

       wherein said statistical procedure ~~includes method~~ includes Bernoulli trials executed by

each node.

14.   (Original) The system according to the claim 8, wherein said wireless transmission

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system is a Bluetooth System.

15.   (Currently Amended) The system according to the claim 14, wherein nodes which are connected as slaves in a piconet carrying on ~~said~~ a node discovery on behalf or in addition to said Master-designate such that a piconet/scatternet for the Bluetooth system is formed.

16.   (Cancelled).

17.   (Cancelled).

18.   (Cancelled).

19.   (Currently Amended) A computer program product having a computer readable medium having a computer program recorded therein for organizing a set of nodes into a minimum number of connected clusters of bounded size in a wireless transmission system, said computer program product ~~including;~~ including:

computer program code means for using of bits in packets used in ~~the~~ an initial stages of ~~the~~ a device discovery procedure, to include information relating to a state of said nodes during the initial stages of the procedure;

computer program code means for setting parameters in the procedure for device discovery to achieve ~~the said~~ a separation of the nodes into those in ~~said~~ a transmit-state and ~~said~~ a receive-state;

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computer program code means for defining a Master-designate among said nodes through a statistical procedure and defining remaining nodes as a Slave-designate; and

computer program code means for defining a cluster including said Master-designate and at least one said Slave-designate, wherein said Slave-designate continuously scans for ~~said~~ an inquiry message transmitted from said Master-designate and said Slave-designate transmits ~~said~~ an inquiry response to said Master-designate upon receiving said inquiry message to establish a connection between said Master-designate and said Slave-designate[[.]]<u>,</u>

<u>wherein at least one Super-master-designate is selected from said Master-designate and at least one Proxy-Slave is selected for each Master-designate.</u>

20.   (Currently Amended) ~~The computer program product according to the claim 19,~~ <u>A computer program product having a computer readable medium having a computer program recorded therein for organizing a set of nodes into a minimum number of connected clusters of bounded size in a wireless transmission system, said computer program product including:</u>

<u>computer program code means for using of bits in packets used in an initial stages of a device discovery procedure, to include information relating to a state of said nodes during the initial stages of the procedure;</u>

<u>computer program code means for setting parameters in the procedure for device discovery to achieve a separation of the nodes into those in a transmit-state and a receive-state;</u>

<u>computer program code means for defining a Master-designate among said nodes through a statistical procedure and defining remaining nodes as a Slave-designate; and</u>

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computer program code means for defining a cluster including said Master-designate and at least one said Slave-designate, wherein said Slave-designate continuously scans for an inquiry message transmitted from said Master-designate and said Slave-designate transmits an inquiry response to said Master-designate upon receiving said inquiry message to establish a connection between said Master-designate and said Slave-designate,

wherein wherein at least one Super-master-designate is selected from said Master-designate and at one Proxy-Slave is selected for each Master-designate, said computer program further comprising means for communicating between said Super-master-designate of one of said cluster and said Proxy-Slave of other of said cluster such that said Super-master-designate collects information of said clusters from each of said Proxy-Slave having an predetermined ID.

21.   (Original) The computer program product according to the claim 19, wherein said bits in said packet are transmitted in initial stages of discovery of nodes and include information to convey states of said nodes.

22.   (Currently Amended) ~~The computer program product according to the claim 19,~~ A computer program product having a computer readable medium having a computer program recorded therein for organizing a set of nodes into a minimum number of connected clusters of bounded size in a wireless transmission system, said computer program product including:

computer program code means for using of bits in packets used in an initial stages of a device discovery procedure, to include information relating to a state of said nodes during the initial stages of the procedure;

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computer program code means for setting parameters in the procedure for device discovery to achieve a separation of the nodes into those in a transmit-state and a receive-state;

computer program code means for defining a Master-designate among said nodes through a statistical procedure and defining remaining nodes as a Slave-designate; and

computer program code means for defining a cluster including said Master-designate and at least one said Slave-designate, wherein said Slave-designate continuously scans for an inquiry message transmitted from said Master-designate and said Slave-designate transmits an inquiry response to said Master-designate upon receiving said inquiry message to establish a connection between said Master-designate and said Slave-designate,

wherein an interval of ~~said~~ an inquiry scan is close to a duration of a scan window for said inquiry scan.

23.   (Currently Amended) ~~The computer program product according to the claim 19,~~ A computer program product having a computer readable medium having a computer program recorded therein for organizing a set of nodes into a minimum number of connected clusters of bounded size in a wireless transmission system, said computer program product including:

computer program code means for using of bits in packets used in an initial stages of a device discovery procedure, to include information relating to a state of said nodes during the initial stages of the procedure;

computer program code means for setting parameters in the procedure for device discovery to achieve a separation of the nodes into those in a transmit-state and a receive-state;

computer program code means for defining a Master-designate among said nodes through

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a statistical procedure and defining remaining nodes as a Slave-designate; and

computer program code means for defining a cluster including said Master-designate and at least one said Slave-designate, wherein said Slave-designate continuously scans for an inquiry message transmitted from said Master-designate and said Slave-designate transmits an inquiry response to said Master-designate upon receiving said inquiry message to establish a connection between said Master-designate and said Slave-designate,

wherein said bits in packets include information selected from the group consisting of numbers of responses received by said node by a predetermined period, numbers of said nodes included in said cluster, whether or not said node transmitted said inquiry response is included in said cluster, and whether or not said node transmitting said inquiry response is said Master-designate.

24.   (Original) ~~The computer program product according to the claim 19,~~ A computer program product having a computer readable medium having a computer program recorded therein for organizing a set of nodes into a minimum number of connected clusters of bounded size in a wireless transmission system, said computer program product including:

computer program code means for using of bits in packets used in an initial stages of a device discovery procedure, to include information relating to a state of said nodes during the initial stages of the procedure;

computer program code means for setting parameters in the procedure for device discovery to achieve a separation of the nodes into those in a transmit-state and a receive-state;

computer program code means for defining a Master-designate among said nodes through

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a statistical procedure and defining remaining nodes as a Slave-designate; and

computer program code means for defining a cluster including said Master-designate and at least one said Slave-designate, wherein said Slave-designate continuously scans for an inquiry message transmitted from said Master-designate and said Slave-designate transmits an inquiry response to said Master-designate upon receiving said inquiry message to establish a connection between said Master-designate and said Slave-designate,

wherein said statistical procedure includes Bernoulli trials executed by each node.

25.　　(Original) The computer program product according to the claim 19, wherein said wireless transmission system is a Bluetooth System.

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